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**UPPER ATMOSPHERE  
RESEARCH SATELLITE  
(UARS)**

NC999967

**(Emergency Support)**

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TDS Mgr: N. A. Fanelli  
NOPE: R. E. Nevarez

Project Mgr: V. Moore (GSFC)  
MOM: S. Osler (GSFC)  
LV/Range: STS/ETR

Launch Date: September 26, 1991

Projected SC Life/DSN Support: 1.5 years/1.5 years

Project Responsibility: Goddard Space Flight Center (GSFC)

Source: SIRD June 1983

Sponsor: OSO

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A. MISSION DESCRIPTION

The UARS project is designed to study the Earth's middle and upper atmosphere.

B. FLIGHT PROFILE

The UARS satellite will be launched from the ETR in 1991 via the STS shuttle. It will be placed directly into a circular orbit of 600 km x 600 km x 57 degrees. Its period will equal 97 minutes.

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## C. COVERAGE

## 1. Coverage Goals

Coverage will be provided by the DSN for UARS emergencies that would prevent communications via the normal channel of TDRSS to White Sands. Emergency support would be provided by the DSN 26-meter subnetwork of stations.

## 2. Network Support

The support provided by the DSN is indicated in the following table:

<u>System</u>	<u>Goldstone</u>	<u>Canberra</u>	<u>Madrid</u>
	12 14 15 16	42 43 45 46	61 63 66
S-band TLM	E	E	E
S-band CMD	E	E	E
S-band TRK	E	E	E

NOTE: E = Emergency

## D. FREQUENCY ASSIGNMENTS

Frequencies are allocated according to the following table:

<u>System</u>	<u>Uplink (MHz)</u>	<u>Downlink (MHz)</u>	<u>Polarization</u>
S-band TLM	--	2287.5	
S-band CMD	2106.4	--	
S-band TRK	2106.4	2287.5	

## E. SUPPORT PARAMETERS

The support parameters for the Telemetry, Command, and Support Systems are listed below:

## (1) Telemetry

Data Streams	2
Format	
Subcarrier Frequency	
Bit Rates	1, 32, or 512 kb/s
Coding	
Record	

## (2) Command

Format	PCM(NRZ-L)PSK/PM
Bit Rate	1 kb/s, 0.125 kb/s
Subcarrier Frequency	16,000 Hz

## (3) Support

Uplink Power	TBD
Antenna Rate	Moderate
Antenna Angle Data	Required
Antenna Autotrack	Required
Doppler Rates	Moderate
Range Format	TBD
Recording	
. Analog	Required
. Digital	

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